

DT01 Rec'd PCT/PTO 19 JAN 2005

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re National Phase of:

Applicant: Robert William Eason et al.  
PCT Application No.: PCT/GB2003/003242  
PCT Filing Date: July 21, 2003  
Title: OPTICALLY INDUCED REFRACTIVE INDEX MODIFICATION IN FERROELECTRIC OPTICAL  
Attorney Docket No. DYOUNP0283US

## INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

1. Pursuant to 37 C.F.R. 1.97 and 1.98, and in compliance with 37 C.F.R. 1.56, the Office's attention is directed to the patents, pending applications, publications and other information listed on the attached PTO-1449.

Regarding any document, publication or other information for which a date is not given on the attached PTO-1449, Applicant(s) believe(s) the same may qualify as "prior" art to this application and should be treated accordingly, although Applicant(s) reserve(s) the right to contest the prior art status of any document, publication or information, should issue arise.

2. Regarding each listed document that is not in the English language, an English-language translation accompanies this Statement as indicated on the attached PTO-1449 or a concise explanation of the relevance of the document is set forth in the following document(s):

- (a) X Copy of each English language version of a search report indicating the degree of relevance found by the foreign office of each document being submitted from the search report, is being submitted herewith or has previously been submitted.
- (b) \_\_\_ Attached is a "Concise Explanation of Relevance of Non-English Language Documents".

3. Pursuant to 37 C.F.R. 1.97(b) this Statement is being filed (one must be checked):

- (a) X Within 3 months of the filing date, date of entry into the National Stage, or filing date of CPA.
- (b) \_\_\_ Before the mailing date of a first Office Action on the merits. If this Statement is not filed before the mailing date of a first Office Action on the merits, the required certification is given below or, in the absence thereof, the Office is authorized to charge the required fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 18-0988 for consideration of this Statement.
- (c) \_\_\_ Before the mailing date of a first Office Action on the merits after a first or second submission after final rejection under 37 C.F.R. 1.129(a).

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(d) \_\_\_ After the period set forth in 37 C.F.R. 1.97(b) but before the mailing date of either a final action or a notice of allowance.

(1) \_\_\_ The required certification is given below, or

(2) \_\_\_ Enclosed is a check covering the fee set forth in 37 C.F.R. 1.17(p) for consideration of this Statement, or

(3) \_\_\_ Charge the fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 18-0988

(e) \_\_\_ After the mailing date of either a final action or a notice of allowance, but before payment of the issue fee. Petition hereby is made for consideration of this Statement and the required certification is indicated below.

(1) \_\_\_ Enclosed is a check covering the fee set forth in 37 C.F.R. 1.17(p), or

(2) \_\_\_ Charge the fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 18-0988.

4. Certification (if applicable)

(a) \_\_\_ The undersigned hereby certifies that each item of information contained in this Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this Statement.


(b) \_\_\_ The undersigned hereby certifies that no item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the undersigned's knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than 3 months prior to the filing of this Statement.

5. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 18-0988.

Respectfully Submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By

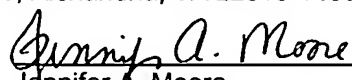
  
Don W. Bulson  
Reg. No. 28,192

1621 Euclid Avenue, 19th Floor  
Cleveland, Ohio 44115  
(216) 621-1113

**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8**

I hereby certify that this correspondence (along with any paper referenced as being attached or enclosed) is being deposited on the below date with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: 1-19-05

  
Jennifer A. Moore

Form PTO-1449 (Modified)  <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>  (Use several sheets if necessary)	Atty Docket No.	Serial No.
	DYOUNP0283US	107522042
	Applicant:	
	Robert William Eason et al.	
	Filing Date	Group

## U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Sub-class	Filing Date if Appropriate
	6,456,762	09/2002	Nishiki et al.			

## FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class	Sub-class	Translation	
						Yes	No
	2001 166159	06/2001	JP				
	99/22256	05/1999	WO				

## OTHER ART

Examiner Initial	Author, Title, Date, Pertinent Pages, etc.
	Wu, B. et al. "UV Written Bragg Gratings on LiNbO <sub>3</sub> Channel Waveguides." <u>Proceedings of the Australian Conference on Optical Fibre Technology</u> . (7/1999).
	Park, N. et al. "Photorefractive Waveguide Formation with Refractive Index Reversal by Use of Thermal Fixing." <u>Electronic Letters</u> . 36.5 (3/2000): 429-430.
	Itoh, K. et al. "Fabrication Experiment of Photorefractive Three-dimensional Waveguides in Lithium Niobate." <u>Optics Letter</u> . 19.9 (05/1994): 652-654.
	Itoh, K. et al. "Fabricating Micro-Bragg Reflectors in 3-D Photorefractive Waveguides." <u>Optics Express</u> . 2.12 (06/1998): 503-508.
	Zhao, F. et al. "Ultraviolet Ca K-line Narrow-bandwidth Imaging Filters Based on Holographic Bragg Gratings in Photorefractive Materials." <u>Optical Engineering</u> . 36.10 (10/1997): 2918-2921.

Examiner Initial	Author, Title, Date, Pertinent Pages, etc.	10/522842 DT01 Rec'd PCT/PTC 19 JAN 2005
	Matoba, O. et al. "Array of Photorefractive Waveguides for Massively Parallel Optical Interconnections in Lithium Niobate." <u>Optics Letters</u> . 21.2 (01/1996): 122-124.	
	McMillen, D. et al. "Holographic Recording in Specially Doped Lithium Niobate Crystals." <u>Optics Express</u> . 2.12 (06/1998): 491-502.	
	Britton, P.E. et al. "Parametric Oscillator Directly Pumped by a 1.55- $\mu$ m Erbium-fiber Laser." <u>Optics Letters</u> . 24.14 (07/1999): 975-977.	
	Mizzi, P. et al. "Analysis and Characterisation of Erbium Implanted, Titanium Diffused Lithium Niobate Optical Waveguides." <u>Optoelectronics and Microelectronic Materials and Devices Proceedings</u> . (12/1996): 434-437.	
	Mignotte, C. "Structural Studies of Erbium-Implanted LiNbO <sub>3</sub> Single Crystals." <u>Nuclear Instruments &amp; Methods in Physics Research, Section -B</u> . 187.1 (01/2002): 95-110.	
	Sada, C. et al. "Erbium Incorporation in LiNbO <sub>3</sub> Crystals Obtained by Ion-exchange Process." <u>Optics Materials</u> . 19.1 (02/2002): 23-31.	
	Becker, C. et al. "Integrated Optical Ti:Er:LiNbO <sub>3</sub> Distributed Bragg Reflector Laser with a Fixed Photorefractive Grating." <u>Optics Letters</u> . 23.15 (08/1998): 1194-1196.	
	Hukriede, J. et al. "Thermally Fixed Reflection Gratings for Infrared Light in LiNbO <sub>3</sub> :Ti:Fe Channel Waveguides." <u>Optics Letters</u> . 23.17 (09/1998): 1405-1407.	
	Wooten, E. et al. "A Review of Lithium Niobate Modulators for Fiber-Optic Communications System." <u>IEEE Journal of Selected Topics in Quantum Electronics</u> . 6.1 (2000): 69-82.	
	Schmidt, R. V. et al. "Acoustooptic Bragg Deflection in LiNbO <sub>3</sub> Ti-Diffused Waveguides." <u>IEEE Journal of Quantum Electronics</u> . (01/1975): 57-59.	
	Schmidt, R. V. et al. "Metal-diffused Optical Waveguides in LiNbO <sub>3</sub> ." <u>Applied Physics Letters</u> . 25.8 (10/1974): 458-460.	
	Jackel, J. L. et al. "Proton Exchange for High-index Waveguides in LiNbO <sub>3</sub> ." <u>Applied Physics Letters</u> . 41.7 (10/1982): 607-608.	

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

### Information Disclosure Statement PTO-1449 (Modified)

The identification of any reference is not intended to be, and should not be understood as being, an admission that such publication, in fact, constitutes "prior art" within the meaning of applicable law since, for example, a given reference may have a later effective date than first seems apparent or the reference may have an effective date which can be antedated. The "prior art" status of any reference is a matter to be resolved during prosecution.

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